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ABSTRACT

A series of observations is made regarding the potential impact of the Remotely Accessible Management System (RAMS) upon the administrative structure of the Pontiac, Michigan City School System. Nine major results of the district wide needs assessment are reported, and evidence is advanced to support the conclusion that modern educational organizations which rely upon participatory management need fast communications, large data bases, interacting files, and sophisticated hardware, all of which are provided by a computerized management information system. The major characteristics and kinds of information flow found in organizations with participatory management are discussed, and some alternative models of organization are reviewed. (PB)

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# ORGANIZATIONAL IMPACT OF RAMS

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The purpose of this last of a trilogy of reports is to make some observations regarding the potential impact of RAMS* upon the design of the educational administrative structure, upon the functioning of that structure, and upon the people within that structure.

While speed, comprehensiveness, and flexibility are desirable values of a good data processing system, I submit to you yet another criteria for judgment of systems effectiveness. Once the system is designed and installed, does the administrative structure behave differently? Has the structure been redefined? Have responsibilities changed and are there new lines of communication? If not, we may be paying for a black box filled with fast thinking midgets merely carrying out the same routines with high speed and fooling the world by labeling themselves as "Responsive".

The School District of the City of Pontiac has been one of several centers of social upheaval including such events as the riots of 1968 and court-ordered integration in 1971. Pontiac is located in the center of the affluent County of Oakland sharing little in common with its neighboring districts in terms of family income, employment rate, racial balance, and scores in reading and mathematics. In this environment, clearly, a needs assessment was in order.

During the 1969/70 school year, three representatives of Michigan State University were commissioned to prepare conceptual models of organization that would suggest directions and goals for changes in the administrative and control structure of the school system.

It was contemplated that the change process would be set in motion only after careful study of the implications and with thoughtful consideration for the people now on the staff. Many of those in the administrative structure would have to change sharply their accustomed role. Their authority, their accountability and their lines of communication might be substantially different--and perhaps even might be changed once again in the process of gradual reorganization.

The underlying assumption which prompted the Superintendent and Board to seek out the consultants was that conditions in Pontiac--as in most school districts at all comparable--were so different in so many

* Trademark, Oakland Schools

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particulars from anything in the past, that administrative structure, however well designed for generations past, may be badly inadequate--or at the very least obsolescent--for the 1970's.

In general, the consultants concluded that the major concerns and needs of the Pontiac school organization might be summed up in the following statements.

1) There is needed a higher degree of responsiveness in all elements of the system: users--students and parents; producers--teachers and educational specialists; and managers--administrators and board of control.

   This implies a need for a high degree of decision-making at the level where problems arise; improved communications and relations both internal and external; and wider participation in policy formulation.

2) There is needed a careful definition of responsibility, authority, and accountability for all the major elements in the educational organization.

   This implies a need for reasonably complete delimitation of responsibility at all levels; reasonably defined exercise of authority at all levels; and reasonably clear accountability at each level of authority and by each member of the educational community to a specifically designated person, committee or board.

3) There is needed a recognition of the power of organizations and their potential value in helping to shape and interpreting educational policy.

4) There is a need for more and speedier access to educational specialists.

5) There is a need for an agency charged specifically with planning, both short and long-range, for the entire district.

   This implies a need for centering responsibility for the accumulation and handling of all data important to educational planning in a single school district agency.

6) There is an acknowledged need for assessment of educational achievement and of employee performance.

7) There is a recognition of the need for leadership by example in many kinds of constructive efforts to resolve social issues and to relieve social tensions.

8) There is an understanding of the importance of centralized technological hardware to serve the educational community.

This implies a need to provide centralized computer services to strengthen the recording, relating, and applying of all relevant data for use at all levels of management; and to devise and recommend ways it can support the educational program.

9) There is a recognition that there are variables that may be influenced to a degree but lie beyond the power of management or boards at any level to control.

This implies a need to accommodate to some kinds and degrees of control by state and federal agencies; and design management and control so that it may work flexibly and effectively with the differing attitudes, values, and behaviors of various elements of the local constituency.

These identified needs; most of which have either direct or indirect dependence on a management information system for solutions, serve to emphasize the importance of the elements of rapid communication, a massive data base, interacting files, and moderately sophisticated hardware. These elements, then, provide the base for new relationships among administrators.

These relationships were illustrated by Likert in 1967 when he described the organizational characteristics of four systems of management.

1) Exploitive Authoritative
2) Benevolent Authoritative
3) Consultative
4) Participative

These systems can be best understood by the characteristics of each system in response to a specific question.

For example, in response to, "How much confidence is shown in subordinates?" is described as NONE, CONDESCENDING, SUBSTANTIAL, and COMPLETE as we move from Exploitive Authoritative to a Participative system.

The direction of information flow moves from DOWNWARD, MOSTLY DOWNWARD, DOWN AND UP, to DOWN, UP AND SIDEWAYS.

The accuracy of upward communication is described as OFTEN WRONG, CENSORED FOR THE BOSS, LIMITED ACCURACY, ACCURATE.

The level at which decisions are formally made begins with MOSTLY AT THE TOP, POLICY AT TOP WITH SOME DELEGATION, BOARD POLICY AT THE TOP WITH MORE DELEGATION, and reaches THROUGHOUT BUT WELL INTEGRATED.

And, as a final example, what are cost, productivity, and other control data used for? Likert says POLICING-PUNISHMENT, REWARD AND PUNISHMENT, REWARD AND SOME SELF-GUIDANCE, and SELF-GUIDANCE AND PROBLEM SOLVING.

Any significant move towards a Participative System, or movement towards the task force approach of Ad-Hocracy described by Toffler in Future Shock, or toward meeting the needs previously described regardless of labels, may well result in just that, future shock.

Let us look at some conceptual models and some real Tables of Organization. I will leave to yor judgment whether technological resources are critical to implementing an atypical organizational arrangement. If you decide it is, bear in mind that effective technological resources will create, modify, or eliminate job functions as we know them and while we may have moved toward the solution of a serious social problem, we must accept responsibility for creating a new problem. The kind of problem I refer to centers around people, their relationship to each other, and their relationship to the work environment. Leadership in the development of technological services is vital.

A Table of Organizations familiar to all of us emphasizes the vertical reporting structure. Typical divisions of responsibility are Instruction, Staff Personnel, and Business. This particular chart adopted in late 1969 (and never implemented) added another division emphasizing Pupil Personnel and Community Relations. This addition reflected an awareness of the problems regarding due process for students and school-community relations.

While this type of organization defines responsibility in a relatively clear-cut manner, but, as the environment changes, it presents three problems.

1) Only the top echelon can identify new problems and assign responsibility for solution--even though they may be the greatest distance from the action level--or where the problem arose.

2) Middle management is not encouraged to identify or solve new problems simply because of the clear-cut responsibilities. This is usually expressed as "That's not my responsibility" or "That's not in my job description". This is Management By Abortion.

3) Service functions, e.g., data processing, if it is to serve all segments of the organization may find it very difficult to follow the lines of communication resulting in inefficient coordination. Consequently, the data processing function becomes one of Business, or Personnel, or Instruction, but seldom and.

Another conceptual model expands the basic three to five divisions by adding Social/Political/Economics and Technology to the existing Business, Instruction, and Personnel. This concept was implemented in 1972 by establishing a Management Team of twelve middle managers reporting to the Superintendent for "instructional" functions and to an Assistant Superintendent for "management" functions.

This same Table of Organization may be better understood in a circular format. The dimensions of upward and downward communication remain but sideward communication is now introduced. The focus of attention

hopefully will change from It's not my responsibility" to "How can I help solve the problem". Notice in this drawing the top echelon is reduced in number.

This third conceptual model expands the management team concept to the building level and could be implemented with this Table of Organization. Perhaps, someday, staff orientation will focus on their functional value as a "resource" instead of "assignment".

Here, I believe, people should follow the design of a good data processing system. If people could follow the example of RAMS, i.e., recognize the value of data, establish a data base, and then, learn to interact in terms of problem identification and solution, the educational system legitimately could be labeled "Responsive".

While we have not moved much beyond role identification in the second conceptual model, the possibility of sideward communication (an indirect result of interacting files) has produced some interesting procedural changes. These changes possibly bear a relationship to this quotation from Toffler:

> "...the faster pace of change demands and creates a new kind of information system in society: a loop rather than a ladder. Information must pulse through this loop at accelerating speeds, with the output of one group becoming the input for many others, so that no group, however politically potent it may seem, can independently set goals for the whole."

The first phase of change has resulted in reduced managerial responsibility for the functions of Business and Data Processing.

In the Business Office--

1. Payroll has been moved to Personnel;
2. Accounts Payable is the responsibility of Purchasing;
3. Budget Preparation and Control is being moved to the lowest possible echelon;
4. Large users of payroll deductions prepare their own payroll input;
5. Warehouse Inventory will be a responsibility of Purchasing.

The Business function will be largely a function of recording history and using this history to forecast the future. Day-to-day operations will be handled by other departments until immediate needs have been met at which time the action becomes History.

Data Processing also realigned responsibility closer to the action level.

1. Personnel file maintenance is a function of Personnel via their own terminal;
2. Personnel file information dissemination is a function of Personnel;
3. Course number control in student scheduling is a function of Secondary Education;
4. Student file build, maintenance, dissemination of information, and in-service for information recording sources is a function of Pupil Personnel.

A user of data processing services and growing in importance in communication and decision-making is Research and Development. There is a pressing need, for example, for their involvement in course number control (which in reality is only a step away from recording educational objective attainment) if educational experience history is to be comprehensible.

Computer assisted or managed instruction must be a function of the managers of instructional programs.

The role of Educational Data Systems will be to facilitate communication upward, downward, and sideways. Data Processing will encourage problems be attacked on a task-force basis. Systems will demand interaction among the Needs File (students), the Resources File (personnel), the Ledger File (business office), and the Delivery File (instruction).

RAMS is a major step toward this end.